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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/577,131

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Takeshi Hotaka

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EXAMINER

FISCHER, JUSTIN R

ART UNIT

PAPER NUMBER

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PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/577,131	<b>Applicant(s)</b> HOTAKA, TAKESHI	
	<b>Examiner</b> Justin R. Fischer	<b>Art Unit</b> 1791	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 02 January 2008.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)          | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____  | 6) <input type="checkbox"/> Other: _____                          |

## DETAILED ACTION

### ***Claim Rejections - 35 USC § 103***

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Glintz (US 6,672,349, of record) and further in view of Imamura (US 4,214,058, newly cited) and Sandstrom (US 5,328,949, of record). Glintz is directed to a runflat tire construction comprising a runflat support member formed of a ring-shaped metal shell 2 and rubber elastic members 21,22. In this instance, Glintz generally teaches the use of elastic rubber compositions having different fillers and additives (Column 4, Lines 22-37). While Glintz fails to disclose a specific composition for the aforementioned rubber elastic members, the claimed rubber composition is consistent with those compositions commonly used in the tire industry (in general), as shown for example by Imamura (Column 1, Lines 5-10. Column 2, Lines 15, Column 3, Lines 40-50, and Column 4, Lines 4-10). One of ordinary skill in the art at the time of the invention would have been particularly motivated to use the composition of Imamura since it is described as having a high degree of adhesion to metals (Column 1, Lines 5-10) and the method of Glintz involves a rubber, elastic member that is bonded/attached to a metal rim and a metal shell.

In describing the composition, Imamura suggests 100 phr of at least diene based rubber, sulfur (5 phr in single example- Table 1), 0.01-1 phr of cobalt acetyl acetate, carbon black, and silica. The reference further suggests that "other conventional compounding agents may be suitably added to the rubber composition" (Column 4, Lines 1-3). One of ordinary skill in the art at the time of the invention would have found it obvious to include a silica coupler since such an additive is conventionally used in combination with silica in order to improve the reinforcing effect of silica, as shown for example by Sandstrom (Column 1, Lines 35-64). It is emphasized that silica couplers are conventionally used in tire rubber compositions for the aforementioned benefits. It is further noted that applicant has not provided a conclusive showing of unexpected results to establish a criticality for the claimed composition.

Lastly, with respect to the independent claim, the claimed amounts for the carbon black, silica, and silica coupler are consistent with conventional tire rubber compositions, as shown for example by Sandstrom (Column 2, Lines 40-62).

Regarding claim 2, as is conventional in the tire industry, the rubber composition of Glintz in view of Sandstrom would include sulfur at a loading between 1 and 10 phr (see Example in Table 1).

With respect to claims 3 and 7, the supporting members of Glintz are arranged between the metal shell.

Regarding claims 4, 8, 9, and 17, Glintz suggests the preferred use of aluminum or an aluminum alloy (Column 4, Lines 20-30). One of ordinary skill in the art at the time of the invention would have recognized the language as being generally directed to

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metallic materials, it being well recognized that steel and stainless steel are two of the most common metallic materials. Furthermore, applicant has not provided a conclusive showing of unexpected results to establish a criticality for the use of steel or stainless steel.

As to claims 5, 10, 11, 12, and 18-20, one of ordinary skill in the art at the time of the invention would have been able to appropriately select the bond area in order to obtain a sufficient degree of adhesion between the supporting members and the ring torus- absent any conclusive showing of unexpected results, one of ordinary skill in the art at the time of the invention would have found it obvious to have a ratio S/R of at least 4.5. It is noted that this ratio suggests that the minimum bond area increases with an increase in tire size, as would be expected since larger tires would need increased reinforcement.

With respect to claims 6 and 13-16, it appears from Figure 3 that the bonding surface is comprised of an axial and radial surface.

### ***Response to Arguments***

3. Applicant's arguments with respect to claims 1-20 have been considered but are moot in view of the new ground(s) of rejection.

In regards to Tables I and II, the experiments are not seen to provide a conclusive showing of unexpected results. First, with respect to Table 1, the experiments do not compare the inventive examples with the closest prior art of record. In particular, Imamura describes a rubber composition having a cobalt compound in the form of an organic complex and specifically suggests the use of either cobalt (II) acetyl

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acetate and cobalt (III) acetyl acetate (Column 3, Lines 45-50). The reference fails to suggest the use of a cobalt compound in the form of an organic acid salt (e.g. cobalt naphthenate). A more persuasive showing of unexpected results would be a comparison of rubber compositions having the inventive cobalt compound and additional metal compounds disclosed by Imamura.

Regarding Table II, applicant points to Comparative Example 5 and notes that it does not contain carbon black and silica within the claimed weight ratio range of 10/1 to 1/2. However, a plurality of variables are varied between the inventive examples and the comparative example such that it is unclear if any realized benefits are a result of a single variable or a combination of variables. For example, Example 5 and Comparative Example 5 differ in the amount of carbon black, the amount of silica, and the amount of silica coupler- it is unclear if the realized benefits are a result of the absolute amounts of respective fillers, the ratio of the respective fillers, and/or the absolute amount of silica coupler. It is further noted that examples 6, 8, 10, and 12 additionally contain a different amount of sulfur. Thus, Table II does not provide a conclusive showing of unexpected results to establish a criticality for the use of carbon black and silica having a weight ratio range between 10/1 to 1/2.

### ***Conclusion***

4. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to **Justin R. Fischer** whose telephone number is **(571) 272-1215**. The examiner can normally be reached on M-F (7:30-4:00).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Richard Crispino can be reached on (571) 272-1226. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Justin R Fischer/  
Primary Examiner, Art Unit 1791